

REMARKS

This paper is filed in response to the final *Office Action* mailed October 11, 2006.

Following the amendments above, claims 12-15, 17-23, 25, 36-40, 42-43, 58-70, 72-76, 78-82, 92-96, and 98-112, 114-116, and 120-121 are pending.

Claim 116 is rejected under 35 U.S.C. § 112, second paragraph, for insufficient antecedent basis. Claims 12, 13, 17-21, 36-40, 75, 102-104, 106, 109-113, 117, and 118 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,299,810 to Pierce et al (hereinafter referred to as "Pierce"). Claim 27 is rejected under 35 U.S.C. § 102(b) as being anticipated by an article entitled "Tele-Virtual Reality of Dynamic Mechanical Model" authored by Yamakita, and published in the Proceedings of the 1992 IEEE.RSJ International Conference on Intelligent Robots and Systems (hereinafter referred to as "Yamakita").

Claims 22 and 119 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Pierce in view of the knowledge of one of ordinary skill in the art. Claims 23, 28, 29, 42, 43, 58-70, 72-74, 76, 78-82, 108, and 114-116 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Pierce in view of Yamakita. Claims 14-15, 25, 33-34, 105, and 107 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Pierce in view of an article entitled "A Low-Cost Force Feedback Joystick and its Use in PC Video Games" authored by Ming Ouhyoung et al, and published in the IEEE Transactions on Consumer Electronics, Vol. 41, No. 3, Aug. 1995 (hereinafter referred to as "Ouhyoung") and an article entitled "MagicMouse: Tactile and Kinesthetic Feedback in the Human-Computer Interface using an Electromagnetically Actuated Input/Output Device" authored by Kelley et al (hereinafter referred to as "Kelley"). Claims 92-96, and 98-101 are rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Pierce and Yamakita, and further in view of Ouhyoung and Kelley.

Applicant has amended claims 17, 38, 58, 75, 101-103, 105, and 113-116. Applicant has canceled claims 27-29, 33-34, 112, and 117-119, and added independent claims 120 and 121. No new matter is added by these amendments, and support for the amendments may be found in the specification and claims as originally filed.

Reconsideration and allowance of all claims are respectfully requested in view of the amendments above and the remarks below.

Claim 116 - § 112, second paragraph

Applicant respectfully traverses the rejection of claim 116 under 35 U.S.C. § 112, second paragraph, for insufficient antecedent basis.

On page 2 of the Office Action, Examiner noted that Claim 116, which depended from claim 113, recited “said server computer” with insufficient antecedent basis. Applicant has amended claim 116 to depend from claim 114, which recites “a server computer.” Therefore, Applicant respectfully requests the Examiner withdraw the rejection of claim 116.

Claims 12, 13, 17-21, 36-40, 75, 102-104, 106, 109-113, 117, and 118 -
§ 102(b) - Pierce

Applicant respectfully traverses the rejection of claims 12, 13, 17-21, 36-40, 75, 102-104, 106, 109-113, 117, and 118 under 35 U.S.C. § 102(b) as being anticipated by Pierce.

Applicant has canceled claims 112, 117, and 118, rendering their rejection moot. Applicant respectfully requests that the rejection of claims 112, 117, and 118 be withdrawn.

To anticipate a claim under 35 U.S.C. § 102(b), a reference must disclose each and every element of the claim. *See* M.P.E.P. § 2131.

Because Pierce does not disclose:

- “information transferred... over said network means” as recited in claim 12;
- “receiving a first information... over a network” as recited in amended claims 17 and 75;
- “sending a first computer information... over a network” as recited in amended claim 38; and
- “information received over said network” as recited in claims 102 and 103,

Pierce does not anticipate claims 12, 17, 38, 75, 102, and 103. Pierce discloses computers which poll a shared memory for updates. In contrast to receiving messages over a network, the device in Pierce reads and writes to RAM: “After sending its position signals to the RAM, each computer polls the RAM to determine the positions and orientation of the vehicle

and drones controlled by the opposite computer. Then, based upon its own positions signals plus the position signals that are stored in the RAM from the other computer, each computer causes its associated monitor to display an image of the space.” See Pierce, Column 2, line 68- Column 3 line 7. Reading information from RAM is not the same as “receiving... information over a network.”

Sending and receiving information over a network generally encompasses client computers interconnected via local area networks (LANs) or wide area networks (WANs) and communicating through communications protocols such as TCP/IP. See Specification, page 1, line 25 - page 2, line 29; and page 7 line 4 - page 8 line 34. Furthermore, communication over a network involves network communication protocols. As one example the current application describes a method for “receiving a first information over a network” as:

“[a] preferred method of the present invention for providing force feedback over a network supporting TCP/IP protocols includes: (a) sending a connection request from a client computer over a network supporting TCP/IP protocols to a web server connected to the network that is hosting a desired URL; (b) receiving, parsing, and interpreting (i.e. “processing”) an HTML file at the client computer that was sent from the web server in response to the connection request.”

Pierce was filed June 23, 1992. At the time Pierce was filed, Network communication, for example network communication using the TCP protocol, had been known; the TCP protocol was described in an RFC in September of 1981. However, Pierce does not disclose sending or receiving information over a network. Instead, Pierce describes reading or writing information to RAM. Furthermore, Pierce does not describe any protocols for reading and writing to RAM. Since reading and writing to RAM is not the same as “receiving a first information over a network,” Pierce does not disclose every element recited in claims 12, 17, 38, 58, 75, 102, 103, and 112.

Therefore, Applicant respectfully requests the Examiner withdraw the rejection of claims 12, 17, 38, 75, 102, and 103.

Claim 27 – § 102(b) – Yamakita

Applicant respectfully traverses the rejection of claim 27 under 35 U.S.C. § 102(b) as being anticipated by Yamakita.

Applicant has canceled claim 27, rendering its rejection moot. Applicant respectfully requests the Examiner withdraw the rejection of claim 27.

Claims 22 and 119 - 35 U.S.C. § 103(a) Pierce in view of
The knowledge of one of ordinary skill in the art

Applicant respectfully traverses the rejection of claims 22 and 119 under 35 U.S.C. § 103(a) as being unpatentable over Pierce in view of the knowledge of one of ordinary skill in the art.

Applicant has canceled claim 119, rendering its rejection moot. Applicant respectfully requests the Examiner withdraw the objection to claim 119.

Claim 22 depends from and further limits claim 17, which is not rejected as being unpatentable over Pierce and the knowledge of one of ordinary skill in the art. Therefore claim 22 is patentable over Pierce and the knowledge of one of ordinary skill in the art.

Applicant respectfully requests the Examiner withdraw the rejection of claim 22.

Claims 23, 28, 29, 42, 43, 58-70, 72-74, 76, 78-82, 108, 114-116 – § 103(a) – Pierce in view of
Yamakita

Applicant respectfully traverses the rejection of claims 23, 28, 29, 31, 42-43, 58-70, 72-74, 76, 78-82, 108, and 114-116 under 35 U.S.C. § 103(a) as being unpatentable over Pierce in view of Yamakita.

Applicant has canceled claims 28, 29, and 31, thus rendering their rejection moot. Applicant respectfully requests the Examiner withdraw the objection to claims 28, 29, and 31.

Claims 114-116 now depend from and further limit new claim 120. As such, the rejection of claims 114-116 is rendered moot. Applicant respectfully requests the Examiner withdraw the rejection of claims 114-116.

To establish a *prima facie* case of obviousness under 35 U.S.C. § 103(a), the combined reference must teach or suggest each and every element of the claimed invention. *See* M.P.E.P. § 2143.03. Further, "[i]f [a] proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification." MPEP 2143.01 (citing *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984)).

Because one of ordinary skill in the art would not be motivated to modify Pierce to incorporate the device of Yamakita, claims 17, 38, 58, and 75, and 103, from which claims 23, 28, 29, 31, 42-43, 59-70, 72-74, 76, and 78-82 depend, are patentable over Yamakita. As noted above, Pierce does not teach or suggest "receiving a first computer information... over a network" as recited in claims 17, 27, 38, 58, 75, and 103. Yamakita, however, suggests communication over a network.

Modifying the Pierce device to include communication over a network fundamentally alters the mode of operation of the Pierce device. The invention of Pierce is located in one distinct physical location. More specifically, users of the Pierce device, and the device itself, including the first and second computers and the common ram, are all enclosed in the same device at one distinct physical location. *See* Pierce, figure 1. Furthermore, the solenoids of Pierce which are responsible for Pierce's haptic feedback are electrically connected to the common RAM board. *See* Pierce, figure 2 and column 6, lines 35-38. These solenoids in Pierce rely on a direct electrical communication as they are specifically operable to "convert a signal from the respective computers **through the common RAM board.**" *See* Pierce, column 6, lines 50-56. (Emphasis added).

There is no suggestion, motivation, or teaching in Pierce to allow users to interact over any distance beyond the limitations of direct electrical communication, which is required by the invention of Pierce. *See* Pierce, column 2, lines 65-68.

Furthermore, physically separating the users and the computers of Pierce would eliminate some of the inherent features of an arcade-style device which Pierce is directed towards. For instance, the device of Pierce is specifically directed towards users operating the vehicle

simulator in tandem positions. Features and advantages to the Pierce device may be specific to the device's central singular location.

On the other hand, the present invention is directed towards communication across local and wide-area networks. Client computers on local and wide-area networks communicate via telecommunications protocols and computer networking devices, rather than through a direct electrical connection, as the computers in Pierce communicate.

Modifying the Pierce device to communicate via telecommunications protocols via a network interface over a network such as a local area network or a wide area network would fundamentally alter the mode of operation of the device, and thus, one of ordinary skill in the art would not be motivated to modify the Pierce device to receive information at a network interface. Therefore, claims 17, 38, 58, and 75 are patentable over the combination of Pierce and Yamakita.

Because claims 23, 42-43, 58-70, 72-74, 76, 78-82, and 108 depend from and further limit claims 17, 38, 58, 75, and 103, claims 23, 42-43, 58-70, 72-74, 76, 78-82, and 108 are patentable over the combination of Pierce in view of Yamakita for at least the same reason as claims 17, 38, 58, 75, and 103. Therefore, Applicant respectfully requests the Examiner withdraw the rejection of claims 23, 42-43, 58-70, 72-74, 76, 78-82, and 108.

Claims 14-15, 25, 33-34, 105, and 107 – § 103(a) Pierce in view of Ouhyoung and Kelley

Applicant respectfully traverses the rejection of claims 14-15, 25, 33-34, 105 and 107 under 35 U.S.C. § 103(a) as being unpatentable over Pierce in view of Ouhyoung and Kelley.

To sustain a rejection of a claim under 35 U.S.C. § 103(a), the combined references must teach or suggest each and every element of the claim. *See* M.P.E.P. § 2142.

Applicant has canceled claims 33-34 rendering their rejection moot. Applicant respectfully requests that the rejection of claims 33-34 be withdrawn.

As argued above, because claims 12, 17, and 103 are allowable, claims 14-15, 105 and 107 which depend from and further limit claims 12, 17, and 103 are allowable for the same reasons. Therefore, Applicant respectfully requests the Examiner withdraw the rejection of claims 14-15, 105 and 107.

Claims 92-96 and 98-101 – § 103(a) – Pierce and Yamakita and further in view of Ouhyoung,
and Kelley

Applicant respectfully traverses the rejection of claims 92-96 and 98-101 under 35 U.S.C. § 103(a) as being unpatentable over Pierce in view of Yamakita, Ouhyoung, and Kelley.

To establish a prima facie case of obviousness under 35 U.S.C. § 103(a), the combined reference must teach or suggest each and every element of the claimed invention. *See* M.P.E.P. § 2143.03. Further, "[i]f [a] proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification." MPEP 2143.01 (citing *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984)).

As discussed above, combining the network interface of Yamakita with Pierce would fundamentally alter the invention of Pierce. Thus, for the same reasons as above, claim 101 is patentable over the combination of Pierce in view of Yamakita, Ouhyoung, and Kelley.

Because claims 92-96 and 98-100 depend from and further limit claim 101, claims 92-96 and 98-100 are patentable over the combination of Pierce in view of Yamakita, Ouhyoung, and Kelley for at least the same reason as claim 101. Therefore, Applicant respectfully requests the Examiner withdraw the rejection of claims 92-96 and 98-101.

CONCLUSION

Applicant respectfully asserts that in view of the amendments and remarks above, all pending claims are allowable and Applicant respectfully requests the allowance of all claims.

Should the Examiner have any comments, questions, or suggestions of a nature necessary to expedite the prosecution of the application, or to place the case in condition for allowance, the Examiner is courteously requested to telephone the undersigned at the number listed below.

Respectfully submitted,

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